

of the panel, said plurality of actuator members being capable of moving the panel from the second one of the two stable deformed positions to the first one of the two stable deformed positions.

4. The device of claim 1, wherein said opposing ends of the panel are in a fixed position.

5. The device of claim 1, further comprising an elastic member disposed between and connecting one of the two opposing ends of the panel and a mounting member or disposed between and connecting two mounting members that are movable with respect to each other, said elastic member applying the compressive force deforming the panel into one of two stable deformed positions.

6. The device of claim 5, wherein the elastic member comprises a shape memory alloy.

7. The device of claim 1, further comprising an elastic member disposed between and connecting one of the two opposing ends of the panel and a mounting member or disposed between and connecting two mounting members that are movable with respect to each other, said elastic member applying the compressive force deforming the panel into one of two stable deformed positions.

8. The device of claim 7, wherein the elastic member comprises a shape memory alloy.

9. The device of claim 1, further comprising an elastic member disposed between and connecting a face of the panel and a fixed member, said elastic member applying a force to the panel urging the panel from the one of the two stable deformed positions toward the other of the two stable deformed positions or toward an unstable position between the first and second stable deformed positions.

10. The device of claim 1, wherein the first actuator is a shape memory alloy actuator.

11. The device of claim 2, wherein the first and second actuators are shape memory alloy actuators.

12. The device of claim 1, wherein the first actuator is a piezo actuator.

13. The device of claim 2, wherein the first and second actuators are piezo actuators.

14. The device of claim 1, further comprising an electrical switch or sensor disposed in proximity to the panel and configured to generate or interrupt an electrical signal when the panel is moved from one of the first and second stable deformed positions to another of the first and second stable deformed positions.

15. The device of claim 1, further comprising a controller configured to actuate the first shape memory alloy or piezo actuator member to move the panel from the second one of the two stable deformed positions to the first one of the two stable deformed positions upon the occurrence of a predetermined condition or set of conditions.

16. The device of claim 2, further comprising a controller configured to actuate the first shape memory alloy or piezo actuator member to move the panel from the second one of the two stable deformed positions to the first one of the two stable deformed positions upon the occurrence of a first predetermined condition or set of conditions, and to actuate the second shape memory alloy or piezo actuator member to move the panel from the first one of the two stable deformed positions to the second one of the two stable deformed positions upon the occurrence of a predetermined condition or set of conditions if the panel has not been manually moved from the second one of the two stable deformed positions to the first one of the two stable deformed positions.

17. A method of operating a bi-stable device that comprises an elastically deformable panel laterally disposed between and connected to one or more mounting members directly or indirectly connected to opposing ends of the panel, said panel maintained under compressive force along at least one vector extending between said opposing ends, said compressive force deforming the panel into a one of two stable deformed positions, and a first shape memory alloy or piezo actuator member connected to the panel, the method comprising:

applying heat or electric current to the first shape memory alloy or an electric field to the piezo actuator member to move the panel from a second one of the two stable deformed positions to a first one of the two stable deformed positions.

18. The method of claim 17, further comprising applying manual force to the panel to move the panel from the first of the two stable deformed positions to the second of the two stable deformed positions.

19. The method of claim 17, wherein current is applied to the shape memory alloy or piezo actuator upon the occurrence of a predetermined condition or set of conditions.

20. The method of claim 17, wherein the device further comprises a third shape memory alloy member disposed between and connecting one of the two opposing ends of the panel and a mounting member or disposed between and connecting two mounting members that are movable with respect to each other, the method further comprising applying heat or electric current to the third shape memory alloy member, thereby modifying the amount of force applied manually or by the first shape memory alloy or piezo actuator to move the panel between stable positions.

21. A method of operating a bi-stable device that comprises an elastically deformable panel laterally disposed between and connected to one or more mounting members directly or indirectly connected to opposing ends of the panel, said panel maintained under compressive force along at least one vector extending between said opposing ends, said compressive force deforming the panel into a one of two stable deformed positions, and, a first shape memory alloy or piezo actuator member connected to the panel, and a second shape memory alloy or piezo actuator member connected to the panel, the method comprising, in any order:

applying heat or electric current to the first shape memory alloy or an electric field to the piezo actuator member to move the panel from a second one of the two stable deformed positions to a first one of the two stable deformed positions;

optionally applying manual force to the panel to move the panel from the first of the two stable deformed positions to the second of the two stable deformed positions; and

applying heat or electric current to the second shape memory alloy or an electric field to the piezo actuator member to move the panel from the first of the two stable deformed positions to the second of the two stable deformed positions upon the occurrence of a predetermined condition or set of conditions if the panel has not been manually moved from the second one of the two stable deformed positions to the first one of the two stable deformed positions.

22. The method of claim 20, wherein the device further comprises a third shape memory alloy member disposed between and connecting one of the two opposing ends of the panel and a mounting member or disposed between and connecting two mounting members that are movable with respect